

THERE IS CLAIMED:

1. An audio device comprising:
 - means for input by the user of said audio device of an analog speech signal,
 - a converter for converting said analog speech signal into a digital speech signal comprising at least one fundamental frequency,
 - means for storing a set of coded data representing a musical score comprising a set of notes, each note being defined by a fundamental frequency, a duration, and an instrument that plays said note,
 - means for extracting a digital music signal from said set of coded data, and
 - means for mixing a first portion of said digital speech signal and a first portion of said digital music signal to produce a digital sung signal.
2. The audio device claimed in claim 1 further comprising a digital signal processor comprising said means for mixing said first portions of said digital speech signal and said digital music signal.
3. The audio device claimed in claim 1 wherein said means for mixing said first portions of said digital speech signal and said digital music signal comprise means for replacing the fundamental frequency of said speech signal by the fundamental frequency associated with a note of said music signal.
4. The audio device claimed in claim 3 wherein said fundamental frequency of said speech signal is replaced by said fundamental frequency associated with said note of said music signal during a period substantially equal to the duration of said note.
5. The audio device claimed in claim 1 further comprising means for adding to said digital sung signal a second portion of said digital speech signal.
6. The audio device claimed in claim 1 further comprising means for adding to said digital sung signal a second portion of said digital music signal.
7. The audio device claimed in claim 1 wherein said means for mixing said first portions of said digital speech signal and said digital music signal comprise means for replacing at least one harmonic frequency of said fundamental frequency of said speech signal with a harmonic

frequency of said fundamental frequency associated with a note of said musical signal.

8. The audio device claimed in claim 1 further comprising discriminator means for discriminating a consonant from a vowel in said digital speech signal and adapted to activate said means for mixing said first portions of said digital speech signal and said digital music signal during the detection of said vowel.
9. The audio device claimed in claim 1 further comprising a voice activity detector controlling said means for mixing said first portions of said digital speech signal and said digital music signal.
10. The audio device claimed in claim 1 further comprising a vocoder for coding said sung signal.
11. A telecommunication terminal comprising:
 - means for input by the user of said audio device of an analog speech signal,
 - a converter for converting said analog speech signal into a digital speech signal comprising at least one fundamental frequency,
 - means for storing a set of coded data representing a musical score comprising a set of notes, each note being defined by a fundamental frequency, a duration, and an instrument that plays said note,
 - means for extracting a digital music signal from said set of coded data, and
 - means for mixing a first portion of said digital speech signal and a first portion of said digital music signal to produce a digital sung signal.
12. The telecommunication terminal claimed in claim 11 further comprising means for transmitting said digital sung signal to another terminal in real time.
13. The telecommunication terminal claimed in claim 11 further comprising a digital signal processor comprising said means for mixing said first portions of said digital speech signal and said digital music signal.
14. The telecommunication terminal claimed in claim 11 wherein said means for mixing said first portions of said digital speech signal and said digital music signal comprise means for replacing the fundamental frequency of said speech signal by the fundamental frequency associated with a note of said music signal.

15. The telecommunication terminal claimed in claim 14 wherein said fundamental frequency of said speech signal is replaced by said fundamental frequency associated with said note of said music signal during a period substantially equal to the duration of said note.
16. The audio device claimed in claim 11 further comprising means for adding to said digital sung signal a second portion of said digital speech signal.
17. The audio device claimed in claim 11 further comprising means for adding to said digital sung signal a second portion of said digital music signal.
18. The telecommunication terminal claimed in claim 11 wherein said means for mixing said first portions of said digital speech signal and said digital music signal comprise means for replacing at least one harmonic frequency of said fundamental frequency of said speech signal with a harmonic frequency of said fundamental frequency associated with a note of said musical signal.
19. The telecommunication terminal claimed in claim 11 further comprising discriminator means for discriminating a consonant from a vowel in said digital speech signal and adapted to activate said means for mixing said first portions of said digital speech signal and said digital music signal during the detection of said vowel.
20. The telecommunication terminal claimed in claim 11 further comprising a voice activity detector controlling said means for mixing said first portions of said digital speech signal and said digital music signal.
21. The telecommunication terminal claimed in claim 11 further comprising a vocoder for coding said sung signal.